

GUEST EDITORIAL

The Surgical Oncologist and Cancer Education: Mandate or Missed Opportunity?

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Teaching is an accepted responsibility on the part of surgical oncologists. Medical students, residents, primary care physicians, nonphysician primary care providers, and other general surgeons are potential beneficiaries of our educational mandate. Unfortunately, as our daily activities revolve around the delivery of care to our patients and our research activities, education often is more of a footnote than a mandate. Educational endeavors are often the first to be discarded as surgical oncologists are increasingly pressured to work harder and be more productive in the face of ever-shrinking reimbursement, reduced support services, and increasingly competitive research monies. Should we as surgical oncologists then abandon education as a mandate and leave cancer education to “card-carrying” medical educators in the nation’s medical schools? I believe that the answer is a resounding “no” and, furthermore, that the time has never been more suited for surgical oncologists to “step up.”

Cancer education, whether one is referring to the education of medical students, residents, or practicing physicians, is unfortunately poor across the board [1–5]. Medical school surveys, residency surveys, and surveys of practicing physicians reflect the inadequacy of conventional cancer education [3–7]. A recent self-assessment study of a large cohort of surgical residents revealed a remarkably low level of competence regarding breast cancer-related knowledge and skills [8]. More importantly, recent data from our institution and others generated from the testing of medical students and residents with objective standardized patient testing has uncovered numerous and important deficits in oncology-related skills and problem solving [2,7,9–12]. Standardized patient testing underscores the fact that clinical competence is more than just knowledge and encompasses several domains, including clinical skills, technical and operative skills, problem solving and organizational skills, and interpersonal skills. Educational efforts, it must be emphasized, need to address in all of these critical domains. Cancer education, then, is much more than a breast can-

cer lecture given to a group of medical students. There is clearly a vacuum in the area of cancer education. Again, is it worth our time as surgical oncologists to try to fill this vacuum?

Fortunately, there is an ever-increasing literature that demonstrates that education can impact treatment outcomes. Tamblyn et al. [13] have shown that superior performance by Quebec medical school graduates on a standardized patient licensing examination correlated with improved practice patterns, such as more appropriate mammographic screening. Such data suggest that education may be an independent variable in cancer treatment outcomes. Temple [14] has reported lower rectal cancer recurrence rates after rectal surgery in patients treated by surgical oncologists with their unique multidisciplinary training. Recent studies examining the outcomes of breast cancer treatment have suggested that patients treated in high-volume, multidisciplinary facilities have lower cancer-related mortality [15]. Surgical oncologists need only look to the Advanced Trauma Life Support (ATLS) program, in which data indicate lower mortality from trauma in populations for which physicians have received ATLS training [16,17]. Education can make a difference.

At the University of Kentucky, 2 prospective randomized studies have demonstrated a significant impact on clinical skills using abbreviated but intensive cancer instruction (Fig. 1) [18,19]. Carney et al. [20] demonstrated evidence of breast cancer continuing medical education effectiveness using standardized patients in the practices of primary care physicians. Such studies allow us to hypothesize that cancer education can be regarded as an important cancer treatment variable. Through effective

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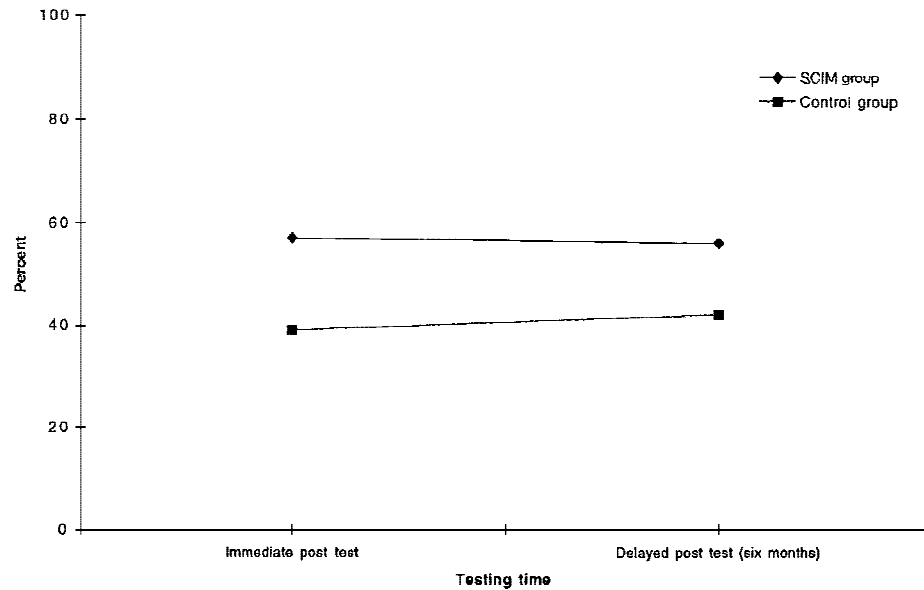


Fig. 1. Primary care trainees: mean performance scores for structured clinical instruction module (SCIM) and control groups.

interventions that improve screening practices, cancer practice patterns, and even communication with cancer patients, the morbidity and mortality related to cancer should be reduced.

Surgical oncologists are in an enviable position when it comes to cancer education. In sharp contrast to the medical educators who set medical school curricula, surgical oncologists have a thorough understanding of cancer-related knowledge and skills. Furthermore, through their multidisciplinary training, surgical oncologists have an understanding of the multidisciplinary nature of contemporary cancer treatment. Not to be minimized either are the communication skills that surgical oncologists have acquired through years of counseling cancer patients and their families.

What can surgical oncologists do to have a greater voice in cancer education? Beginning with local medical schools, surgical oncologists can convey their interest in education to those within the medical school responsible for the cancer curriculum. Activities sponsored by the American Cancer Society and the American College of Surgeons Commission on Cancer should be supported. Surgeons interested in education should consider joining the American Association of Cancer Education, whose meetings offer a wonderful environment for the exchange of ideas related to cancer education.

Surgical oncologists individually and collectively can and should do more, however. Surgical oncologists need to think of new and better ways to teach cancer diagnosis, management, and skills to medical students, residents, primary care providers (both physicians and nonphysicians), and other general surgeons. In an age of increasingly sophisticated information technology, virtual reality, and the Internet, the sky really is the limit in terms of

new and innovative instructional tools. New ways to teach important "low-tech," hands-on skills and interpersonal skills can also be sought. At our institution, we have developed several cancer instructional packages that allow small groups of students, residents, and practicing physicians to interact with cancer patients and faculty representing various cancer disciplines [8,18,21–25]. Trainees learn not only from the faculty but also from the cancer patients themselves. The multidisciplinary curricula for these structured clinical instruction modules emphasize those skills generally learned from textbooks, such as physical examination and patient counseling.

Surgical oncologists should be encouraged not only to develop new strategies in cancer education but also to seek funding for these efforts. Here again, they have an advantage over medical educators. While surgical oncologists share funding sources, such as the Association for Surgical Education, the National Board of Medical Education, and the Robert Wood Johnson Foundation, with medical educators, there are unique funding sources that can be explored. These sources for funding include several at the National Institutes of Health: T32 training grants, K24 patient-oriented research mentoring grants, R03 small pilot grants, R13 conference grants, and the R25 cancer education grants. The R25 Cancer Education Program is an untapped resource for surgical oncologists interested in education. In the most recent funding year, \$14.7 million was dispersed in a total of 89 grants. The R25 program was designed to foster new approaches to cancer education and is ecumenical in terms of who can be funded and what types of innovation are fundable. Unfortunately, very few surgical oncologists are aware of this National Cancer Institute program, and far fewer have written R25 proposals.

As medical educators, and indeed patients, become increasingly aware of the sorry state of contemporary cancer education, surgical oncologists and the Society of Surgical Oncology are well situated to develop novel cancer education programs that reflect both the science and the art of cancer practice. While much attention is given to new cancer treatments and new strategies for screening or cancer prevention, education to date has been largely ignored as a tool to improve cancer treatment outcomes. Surgical oncologists have never had a better or more exciting opportunity to dust off this tool and begin using it. To leave education unused as an instrument for change would constitute a disservice to society in general and to our patients in particular.

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